Electrochemistry, Spectroscopy and Electrogenerated Chemiluminescence of Perylene, Terrylene, and Quaterrylene Diimides in Aprotic Solution

Lee, Sang Kwon; Zu, Yanbing; Herrmann, Andreas; Geerts, Yves; Müllen, Kläus; Bard, Allen J.

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Figure Captions

Figure S1. The scan rate dependence of the redox peak currents of TDI (a) and QDI(b).

Figure S2 UV-vis spectra changes on reduction of PDI-1, (a) decreasing neutral, (b) increasing radical anion and (c) increasing dianion response during the reduction in CH_3CN (electrolyte: 0.1 M $TBAPF_6$).

Figure S3 UV-vis spectra changes on reduction of TDI, (a) decreasing neutral and (b) increasing radical anion response during the reduction in CH_3CN (electrolyte: 0.1 M $TBAPF_6$).

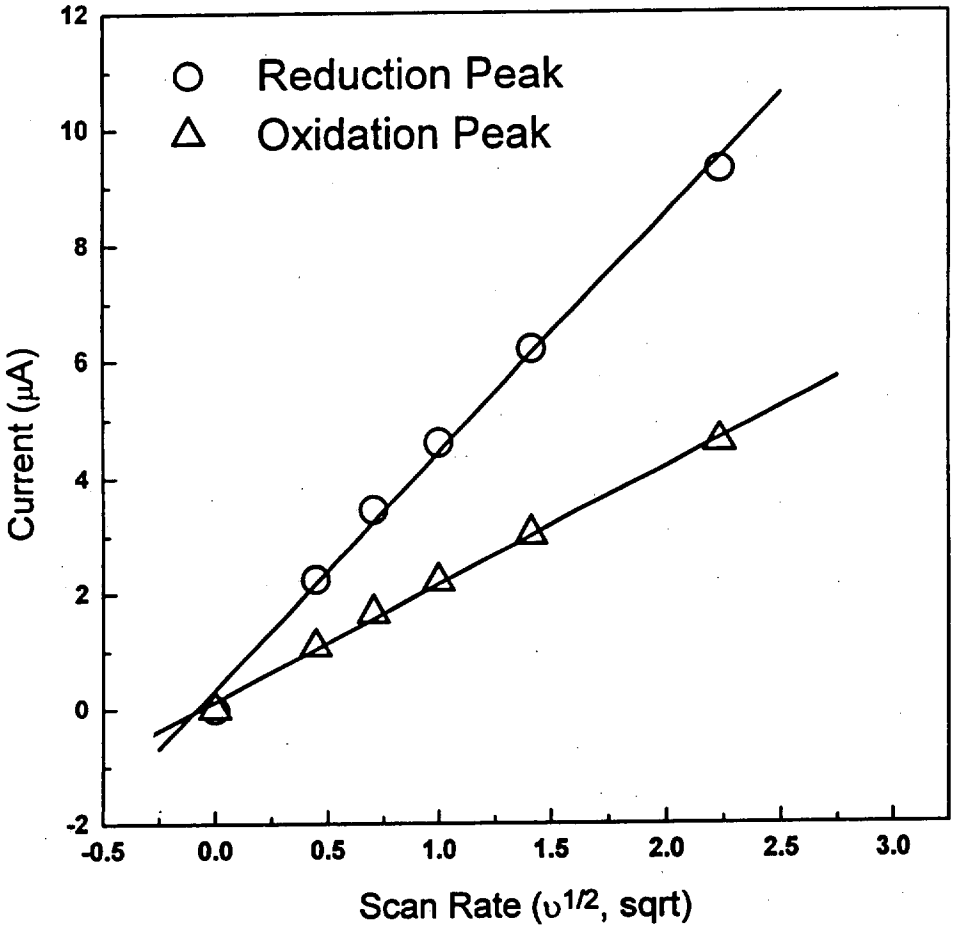
Reduction Peak
Oxidation Peak
Current (μA)
Scan Rate (υ1/2, sqrt)
12
10
8
6
4
2
0
-2
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0

Fig. S1a

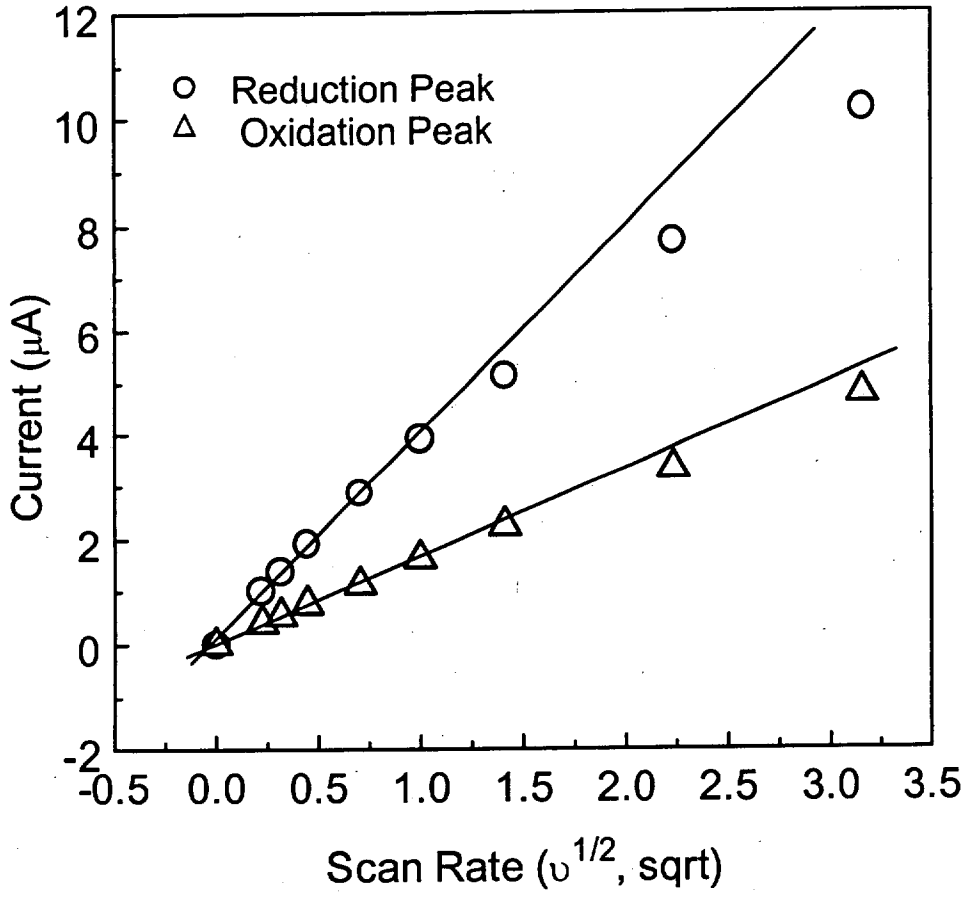

Fig. S1b

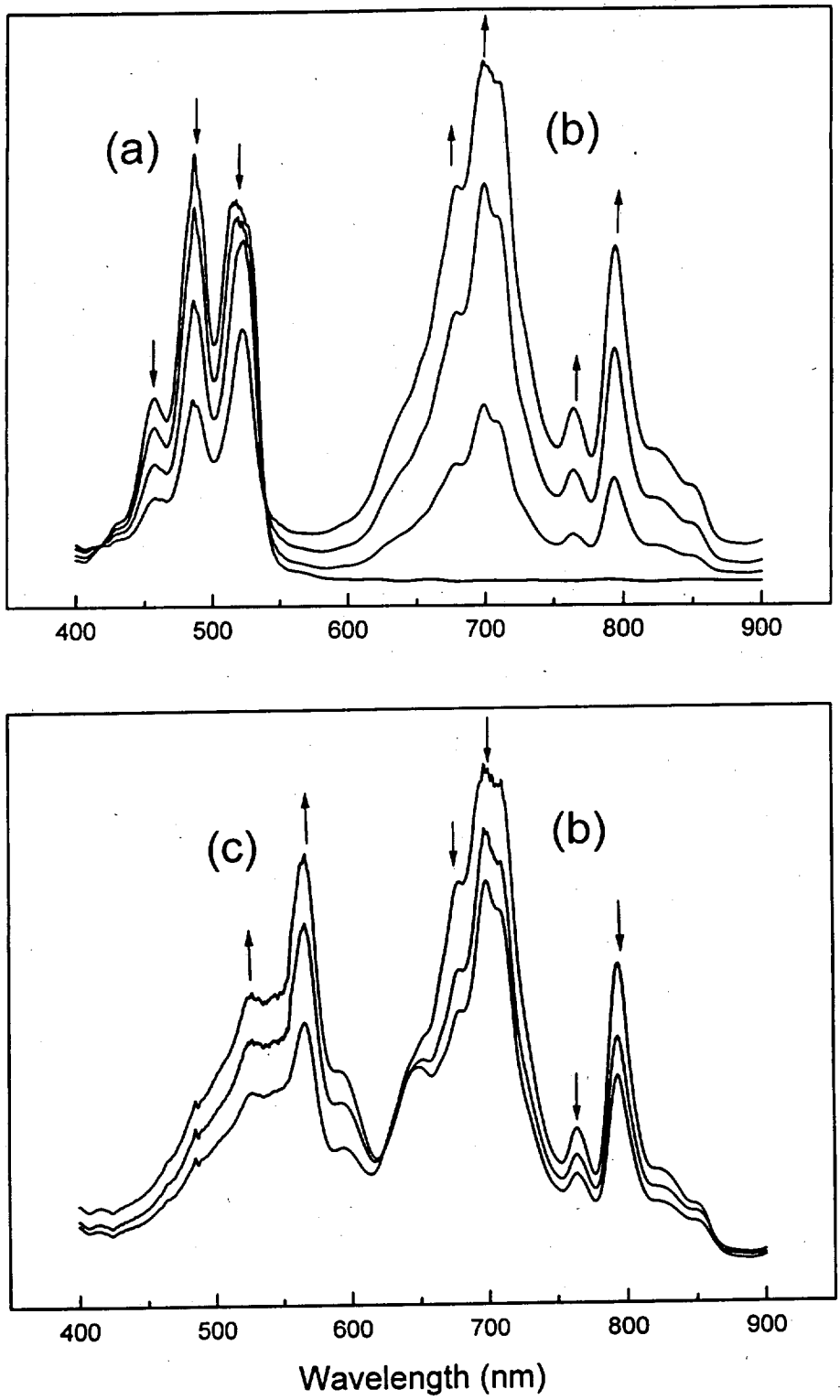

Fig. S2

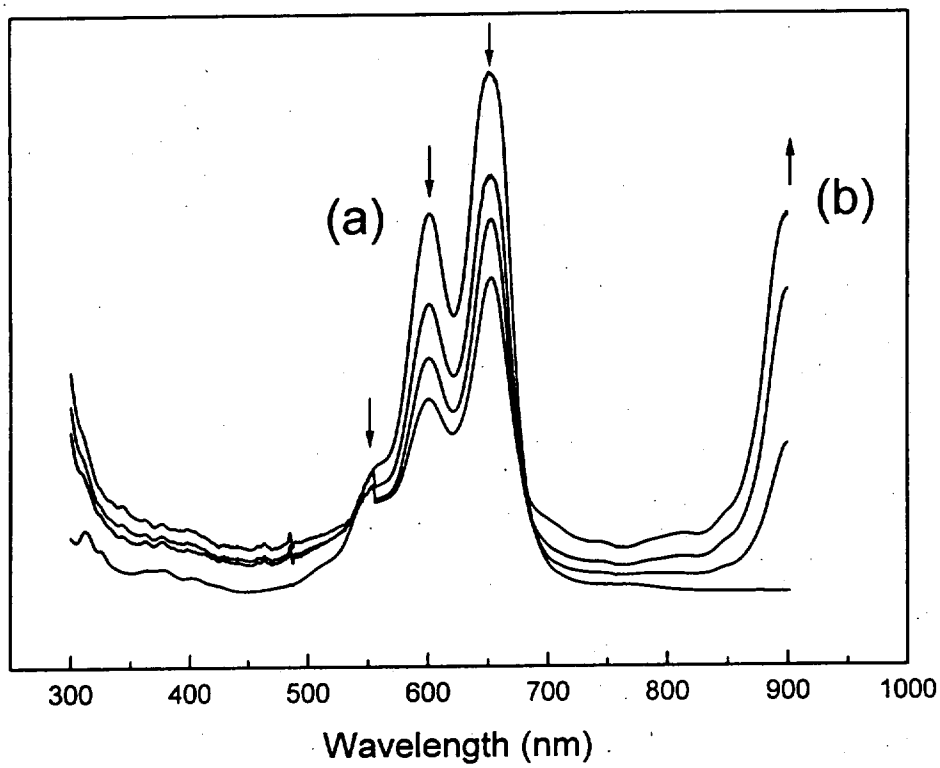

Fig. S3

Table S1. PM3 Calculated Fractional Electron Densities at the Carbonyl Oxygen Atoms (δ_o) in the Diimide Molecules With Different Net Charge (δ)

	δ_o (PDI-1)	δ_o (TDI)[a]	δ_o (QDI)
$\delta = 0$	-0.406	-0.414	-0.418
$\delta = -1$	-0.486	-0.48	-0.473
$\delta = -2$	-0.567	-0.547	-0.530

[a]The electron density at oxygen atom in imide group with N-2,6-di-*iso*-propyphenyl substituent.